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Fifth Semester B.E. Degree Examination, June/July 2023 Automotive Transmission

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

- 1 a. Discuss in detail the requirements of a clutch. (10 Marks)
b. Explain with neat sketch the working of a hydraulic clutch operation. (10 Marks)

OR

- 2 a. With a suitable figure discuss in detail the working of a single plate clutch. (10 Marks)
b. Describe with neat sketch the working of a vacuum operated clutch. (10 Marks)

Module-2

- 3 a. With a neat sketch discuss the working of a fluid flywheel. (10 Marks)
b. Explain Sprag clutch, ball and roller one way clutch with relevant sketches. (10 Marks)

OR

- 4 a. Discuss in detail the working of a torque converter with relevant sketch. (10 Marks)
b. Discuss in detail the working fluid requirements. (10 Marks)

Module-3

- 5 a. With a neat sketch explain the working of a constant – mesh gearbox. (10 Marks)
b. Describe the performance characteristics in different gear with relevant figures. (10 Marks)

OR

- 6 a. Discuss in detail the various resistances to motion of the automobile. (10 Marks)
b. Describe with neat sketch the working of sliding mesh gear box. (10 Marks)

Module-4

- 7 a. With suitable figure explain the working of over drives. (10 Marks)
b. Describe the working of Wilson Planetary transmission with suitable figure. (10 Marks)

OR

- 8 a. Explain the Ford – T gear box with suitable sketch. (10 Marks)
b. Discuss the Pre-selective mechanism with suitable figure. (10 Marks)

Module-5

- 9 a. Describe with neat sketch the working of constant displacement pump. (10 Marks)
b. Discuss the advantages, disadvantages and applications of variable displacement motor. (10 Marks)

OR

- 10 a. Explain with neat sketch Borge-Warner gear box. (10 Marks)
b. Discuss with neat sketch the fundamentals of a hydraulic control system. (10 Marks)

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg. 42+8 = 50, will be treated as malpractice.